// Queue implementation in C

#include <stdio.h>

#define SIZE 5

void enQueue(int);

void deQueue();

void display();

int items[SIZE], front = -1, rear = -1;

int main() {

//deQueue is not possible on empty queue

deQueue();

//enQueue 5 elements

enQueue(1);

enQueue(2);

enQueue(3);

enQueue(4);

enQueue(5);

// 6th element can't be added to because the queue is full

enQueue(6);

display();

//deQueue removes element entered first i.e. 1

deQueue();

//Now we have just 4 elements

display();

return 0;

}

void enQueue(int value) {

if (rear == SIZE - 1)

printf("\nQueue is Full!!");

else {

if (front == -1)

front = 0;

rear++;

items[rear] = value;

printf("\nInserted -> %d", value);

}

}

void deQueue() {

if (front == -1)

printf("\nQueue is Empty!!");

else {

printf("\nDeleted : %d", items[front]);

front++;

if (front > rear)

front = rear = -1;

}

}

// Function to print the queue

void display() {

if (rear == -1)

printf("\nQueue is Empty!!!");

else {

int i;

printf("\nQueue elements are:\n");

for (i = front; i <= rear; i++)

printf("%d ", items[i]);

}

printf("\n");

}

